

RF Exposure evaluation

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b):

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances

≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where } f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz}$$

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

Worse case is as below:

[2402MHz -2.87dBm (0.516mW) output power]

According to the formula.calculate the EIRP test result:

$$[(\text{max.power of channel including tune-up tolerance, mW})/(\text{min.test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

Channel	Measured power(dBm)	Tuneuptolerance(dBm)	Max.TuneupPower(dBm)	Peak output power(mW)	Distance (mm)	Calculation results	Limit (mW/cm2)
2.402	-2.87	-2.87±1	-1.87	0.65012969	5	0.2015	3

Then SAR evaluation is not required